

# United States Department of Transportation

## Transportation Investment Generating Economic Recovery (TIGER)

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### **Westport Waterfront Transit Oriented Development (TOD)**

#### Transportation Infrastructure Improvements

##### **Applicant Contact Information**

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##### **Project Information**

Type: TOD Infrastructure Improvements  
Location: Baltimore City, Maryland  
Congressional District: MD Districts 2 & 7  
Urban Area

**Funds Requested: \$35,530,274**



## Summary

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The Middle Branch of the Patapsco River is Baltimore's best untapped natural resource. Located two miles south of Baltimore's world-famous Inner Harbor, it's six mile waterfront offers more than 275 acres of underutilized land and 100 acres of urban park land that the City plans to transform in to a dynamic, new mixed use district that will substantially increase the City's tax base and position Baltimore to compete as an international city. Yet unlike the Inner Harbor, this district will be on the forefront of a new evolution in urban redevelopment, one that embraces an intermodal transit system, creates a network of restored wetlands, open spaces, and trails and lifts up the surrounding distressed neighborhoods through workforce development, affordable housing and neighborhood revitalization.

In order to catalyze the first phase of this revitalization, the City of Baltimore is requesting a Transportation Investment Generating Economic Recovery (TIGER) grant of \$35,530,274 towards a \$148.4 million transportation infrastructure improvement program. In turn, these improvements will repair and enhance a network of roads, bridges, railroad crossings, transit stations and trails serving the first phase of new development in the Middle Branch, the Westport Waterfront TOD, a \$1.2 billion, public-private partnership.

The Westport Waterfront TOD embodies President Barack Obama's commitment to the redevelopment of brownfields and urban centers. President Obama has acknowledged that "for too long, federal policy has actually encouraged sprawl and congestion and pollution, rather than quality public transportation and smart, sustainable development." The Westport Waterfront TOD represents the most economically competitive, shovel-ready project in the Baltimore region, involving the improvement of a dynamic multi-modal network with job creation and sustainable development.

In 2008, the City of Baltimore approved the sale of Tax Increment Financing (TIF) bonds to fund a majority of the transportation infrastructure costs, and the Westport TOD proceeded to become "shovel-ready," obtaining all required permits. Construction is ready to proceed; however, ongoing turmoil in the municipal bond market has prevented the City from issuing the TIF bonds. **Without the TIGER grant or a very strong and immediate national economic turnaround, this shovel ready transportation infrastructure program and the Westport Waterfront TOD are likely to be put on hold indefinitely – missing critical opportunities for Baltimore to create thousands of temporary and permanent jobs, leverage significant private investment, capitalize on the federal Base Realignment and Closure (BRAC) program in the region, and realize the holistic vision for the redevelopment of the Middle Branch.**

Funds from the TIGER grant, in combination with other local, state, federal and private resources, will:

- Link the Westport Light Rail Station to the Westport Waterfront TOD with a pedestrian bridge over CSX railroad tracks
- Convert a former CSX railroad "swing bridge" to a hiker/biker bridge, part of the City's Gwynns Falls Trail, linking the north and south shores of the Middle Branch
- Improve the geometry of MD-295 ramps to and from the Westport area to more safely accommodate increased traffic accessing the Westport Waterfront
- Upgrade at-grade railroad crossings to improve vehicular and pedestrian safety

- Resurface and/or reconstruct area roadways to a State of Good Repair and construct a new boulevard within the Westport Waterfront redevelopment area
- Remediate brownfield conditions and reduce unfiltered runoff into the Middle Branch

The success of Westport Waterfront and the City's Middle Branch Initiative hinges on the prompt completion of the transportation infrastructure program and enhancement of the area's multiple transportation modes. Specific projects contained in this application can be implemented individually or as part of a broader package, depending on the extent of TIGER funding realized. Taken together, the application emphasizes short and long term job creation, improvement of the multi-modal transportation system, increased levels of public safety, complex public-private partnerships/funding mechanisms, and environmentally-transformative redevelopment all within an Economically Distressed Area (EDA).

## Westport Waterfront Proposed Transportation Infrastructure Program

The proposed improvements to be funded by the TIGER grant are listed in Table 1 and represent a range of highway, bridge, transit, and bicycle/pedestrian projects necessary to adequately serve the proposed transit-oriented development at Westport Waterfront. Even with an aggressive goal of 30% of all trips being non-motorized or by transit, the TOD will still generate significant auto trips which require modest capacity enhancements to the local and regional roadways near the TOD; at full build-out, the Westport Waterfront TOD is expected to generate 3,110 AM peak-hour trips and 4,014 PM peak hour trips. As the Westport area transitions from low-intensity industrial uses to high-intensity, mixed-use development, providing these roadway improvements is critical to avoid congestion and safety hazards on MD 295 and on the ramps leading to and from Interstate 95. Moreover, the proposed improvements are necessary to bring the transportation network to a "State of Good Repair" so as to make Westport and the entire Middle Branch area more attractive to private investment.





**Table 1: Transportation Infrastructure Program Summary  
(All Projects Have Completed Preliminary Engineering )**

<b>Proposed Infrastructure Improvements</b>	<b>Cost (in millions)</b>
1. MD 295/Annapolis Rd/Waterview Ave: Interchange and ramp improvements	6.02
2. SB MD 295 to Annapolis Rd: Ramp improvements	1.44
3. SB MD 295, I-95 to Annapolis Rd: Lane revising to improve weaving	2.16
4. Annapolis Rd – A) Monroe St: New turn lane and turn signal; B) Clare St: New turn lane and signal; C) Manokin St: New turn lane and signal	1.44
5. A) Manokin St: Convert to two 1-way lanes; B) Wenburn St: Convert to two 1-way lanes	0.65
6. Annapolis Rd/Russell St: Widen for new lane for NB I-95 ramp traffic to turn on Annapolis Rd	0.36
7. Light Rail Station: A) Light Rail station enhancements; B) Kent Street Pedestrian Bridge: Construct pedestrian bridge across CSX tracks	3.00
8. Kloman Street Multipurpose Trail: Convert roadway into Gwynns Falls trail extension	0.50
9. CSX Swing Bridge: Structural rehabilitation to support pedestrian/bike trail	5.00
10. Waterview Ave: Resurfacing and base repairs	1.25
11. CSX Grade-Crossing Improvements: A) Wenburn St; B) Waterview Ave; C) Manokin St	0.50
12. A) Waterview/John Moale Blvd: Install new signal; B) John Moale Blvd/Wenburn St: Install new signal; C) John Moale Blvd: Construct new road	10.15
13. Pedestrian bicycle trail construction and enhancements	0.34
14. Public electric conduit and street lighting improvements	2.71
<b>TOTAL IMPROVEMENTS</b>	<b>35.53</b>

## **I. Primary Selection Criteria: Long-Term Outcomes**

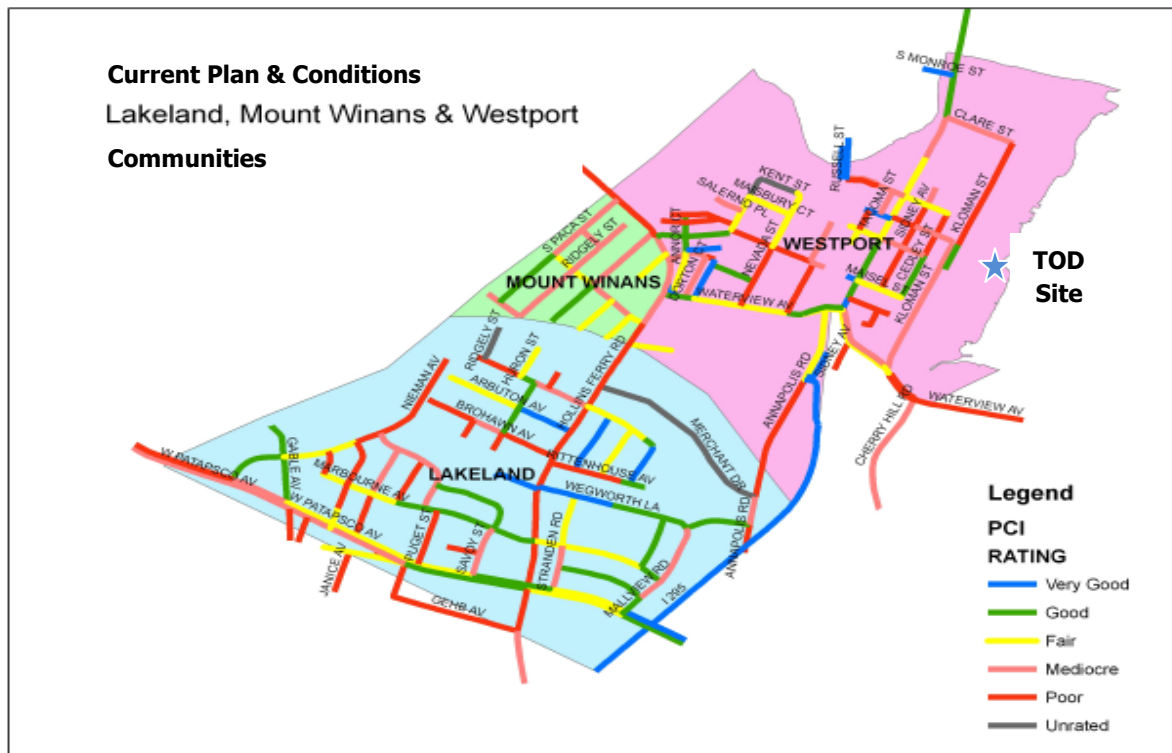
### **A. Improving Roadway Conditions and Operations to a State of Good Repair**

In 2008, Baltimore City adopted an asset management approach to roadway and bridge investment, after years of politically-driven resurfacing or streetscape projects which left the City's overall roadway network in a state of disrepair. In particular, implementing the pavement management program established a mechanism to regularly evaluate the relative health of the pavement network and to provide City decision makers with better information about the benefits and consequences of budget decisions and their effect on the pavement network for both today and the future. Of course, layered onto this systemic approach to pavement preservation planning are criteria relating to the overall health of the City's economy and neighborhoods. For a copy of the City's asset management report, see: <http://www.baltimorecity.gov/government/transportation/tiger.php>

In addition, the City also uses standard Highway Bridge Inventory data to prioritize its bridge rehabilitation and replacement investments. Under the leadership of Mayor Sheila Dixon, the City has significantly ramped up its overall bridge program from an average of one replacement and one rehab project every two years, to a programmed average of three replacements and three rehabs every year, beginning in 2010. Using an asset management approach, and considering economic growth criteria (such as neighboring industrial land uses where posting restrictions should be avoided) the City will dramatically improve its Citywide Bridge Sufficiency Rating by 2014. The Westport Waterfront project includes the reconstruction of three bridges with a BSR of less than 60.

In planning for the Westport Waterfront project, the City is bringing the asset management approach to bear, prioritizing transportation investments based on their condition and criticality to future economic growth. As a result:

- The City of Baltimore will invest \$5,000,000 towards roadway resurfacing or repair projects in the TOD area and surrounding communities in order to raise the Pavement Condition Index (PCI) for Westport and surrounding communities by 20% from 64 to 77 – moving these communities in the top tier of neighborhoods Citywide for pavement condition.



- Two bridge projects in the corridor, Annapolis Road/Waterview Avenue over MD 295 (BSR 43.1) and the Maisel Street Pedestrian Bridge are entering final design and will be under construction concurrent with the early stages of the Westport Waterfront project. A third bridge, Annapolis Road over MD 295 (BSR 35.2), is in the Preliminary Investigation and Development Phase and is expected to be under construction as the first two projects begin their close-out. The total investment in these three bridge projects is expected to be \$20.1 million. **TIGER funds will be used to increase the scope of already programmed bridge rehabilitation projects to improve roadway operations in their immediate vicinity.**

## Roadway Operations

In a comprehensive planning approach similar to asset management, the City has developed a **Middle Branch Transportation Plan** to identify operational, safety and capacity deficiencies in the transportation network. For more information on the plan, see: [www.middlebranch.com](http://www.middlebranch.com). The purpose of the Middle Branch Transportation Plan was to comprehensively assess the area's multi-modal transportation network for issues of capacity, quality and safety, based on existing travel conditions and land uses, and to identify transportation system improvements based on future development potential. This plan built a detailed quantitative data set from traffic counts, transit ridership databases, the City's pavement management system, field observations, development proposals, and other sources. Multiple

City of Baltimore, Department of Transportation -- Westport Waterfront TIGER Application

stakeholder interviews and community meetings were held to gather qualitative data, identify goals and desires, and to consider alternatives. Implementation activities are currently being programmed to take advantage of tax increment financing and traffic mitigation fees associated with vertical development.

**In the Westport area,** current roadway conditions surrounding the development site have several deficiencies which lead to poor traffic operations, thereby increasing emissions from traffic congestion and reducing motorist safety. These deficiencies reflect 1950s era highway design practices and the area's relatively low transportation capacity needed for industrial trip generation. As the Westport area, and much of the Middle Branch, transforms from light industrial use to more intensive mixed-use development, modest improvements to roadway geometry, traffic control, signal timing and intersection configuration are required, as are the strengthening of intermodal connections (see Section I – Primary Selection Criteria: Livability).

To improve roadway operations to a "State of Good Repair," TIGER funds will be used to:

- Widen MD 295 southbound and reconstruct the bridge abutments to extend the exit ramp to Annapolis Road and provide for an improved merge/weave area for vehicles exiting I-95 northbound to MD 295 and/or Annapolis Road.
- Extend the exit ramp from northbound MD 295 to Waterview Avenue and improve substandard geometry.
- Upgrade lane assignments, turn lanes and traffic signals along Annapolis Road between Waterview Avenue and Monroe Street.

To validate the efficacy of these improvements, a capacity analysis was performed for full-build out conditions comparing the operations with and without the proposed transportation infrastructure improvements. The projected traffic volumes for year 2018 were obtained from the **Middle Branch Transportation Plan** and were analyzed using Synchro/SimTraffic and the Highway Capacity Software (HCS) to determine the Level of Service (LOS). Six levels of service are defined to represent operating conditions, ranging from A to F. "A" represents optimum operating conditions and "F" represents congestion. The table below summarizes the results of the analysis.

**Table 2: Level of Service (LOS) Summary**

Improvement Section	2018 Build Without Improvements		2018 Build With Improvements	
	<i>Synchro</i>	<i>HCS</i>	<i>Synchro</i>	<i>HCS</i>
	AM/PM	AM/PM	AM/PM	AM/PM
<b>MD 295/Annapolis Road/Waterview Avenue</b>				
Annapolis Road at Waterview Avenue	C/B		C/A	
SB MD 295 Ramps at Annapolis Road	C/C		B/C	
Merge from Manokin Street to SB MD 295		B/D		- <sup>1</sup>
Diverge from SB MD 295 to Annapolis Road		C/F		- <sup>1</sup>
Weave SB MD 295 b/w Manokin Street and Annapolis Road		- <sup>1</sup>		B/B
Diverge from NB MD 295 to Waterview Avenue		E/C		D/C
NB MD 295 Ramp at Waterview Avenue	C/A		A/A	
<b>SB MD 295 to Annapolis Road</b>				
Merge from Annapolis Road to SB MD 295		C/D		B/C
<b>SB MD 295/SB I-95 to Annapolis Road</b>				

SB MD 295 mainline prior to on-ramp from I-95		B/C		C/D
Weave SB MD 295 b/w on-ramp from I-95 and Manokin Street		D/D		D/E
<b>Annapolis Road/Monroe Street</b>	C/B		C/B	
<b>Annapolis Road/Russell Street Exit Ramp from NB I-95</b>	C/B		C/A	
<b>Waterview Avenue/John Moale Boulevard</b>				

<sup>1</sup>The separate merge/diverge areas become a weaving section

The results of the analysis indicate that while the majority of the changes improve traffic operations and levels of service, SB MD 295 congestion increases slightly due to the elimination of one mainline approach lane. It is important to note here that while congestion may be slightly worse, the revised lane use significantly improves safety by reducing the number of required lane changes downstream of the merge.

## I. Primary Selection Criteria: Long-Term Outcomes

### B. Economic Competitiveness

The Westport Waterfront TOD is located in one of Baltimore City's most distressed areas, which has not benefitted from the most recent wave of urban transformation. Decades of disinvestment and the loss of thousands of manufacturing jobs have placed the surrounding neighborhoods at the bottom third of more than half of City's key health indicators including life expectancy (40) and child asthma (43). Only 26% of the housing units are owner occupied compared to 43% for the rest of Baltimore City. Unemployment is high at 14.4% compared to 9.4% nationally in June 2009, and 43.8% of the population over the age of 16 are not part of the labor force at all; 37% of residents are living in poverty. The neighborhood is severely underserved in terms of employment centers and basic goods and services. (Sources: Baltimore City Health Department and 1990/2000 Census Data, CB Richard Ellis 2008). The injection of over 15,000 retail, office and hotel jobs associated with the Westport TOD will directly benefit the surrounding neighborhoods. The addition of 2,000 market rate and 200 affordable housing units, combined with the City's investment in housing rehab will rejuvenate the area's struggling housing market, and ensure that area residents can participate in the economic revitalization of their neighborhood.

In terms of contributing to national competitiveness, many experts believe that urban places like the Westport TOD will be the sustainable, quality locations that will make the United States competitive in the future. The Brookings Institution's report, "Unleashing the Potential of the Metropolitan Nation," for example, argues that, "when the economy recovers, income inequality and relentless pressure on natural resources and demand for unsustainable energy sources will loom ever larger," as barriers than are currently recognized. Therefore, to achieve a true prosperity, "...our nation must leverage its key assets—innovation, infrastructure, human capital, and quality places—principally concentrated in metropolitan areas." As Harvard economist Michael Porter writes, "the most important drivers of competitiveness are not national. They are regional and local."<sup>2</sup>

Judged by the Brookings criteria, the Westport Waterfront TOD represents metropolitan Baltimore's best opportunity to leverage its key assets to strengthen its national and international economic competitiveness:

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<sup>2</sup> "Blueprint for American Prosperity: Unleashing the Potential of a Metropolitan Nation," The Brookings Institution, Washington, DC., Page 1

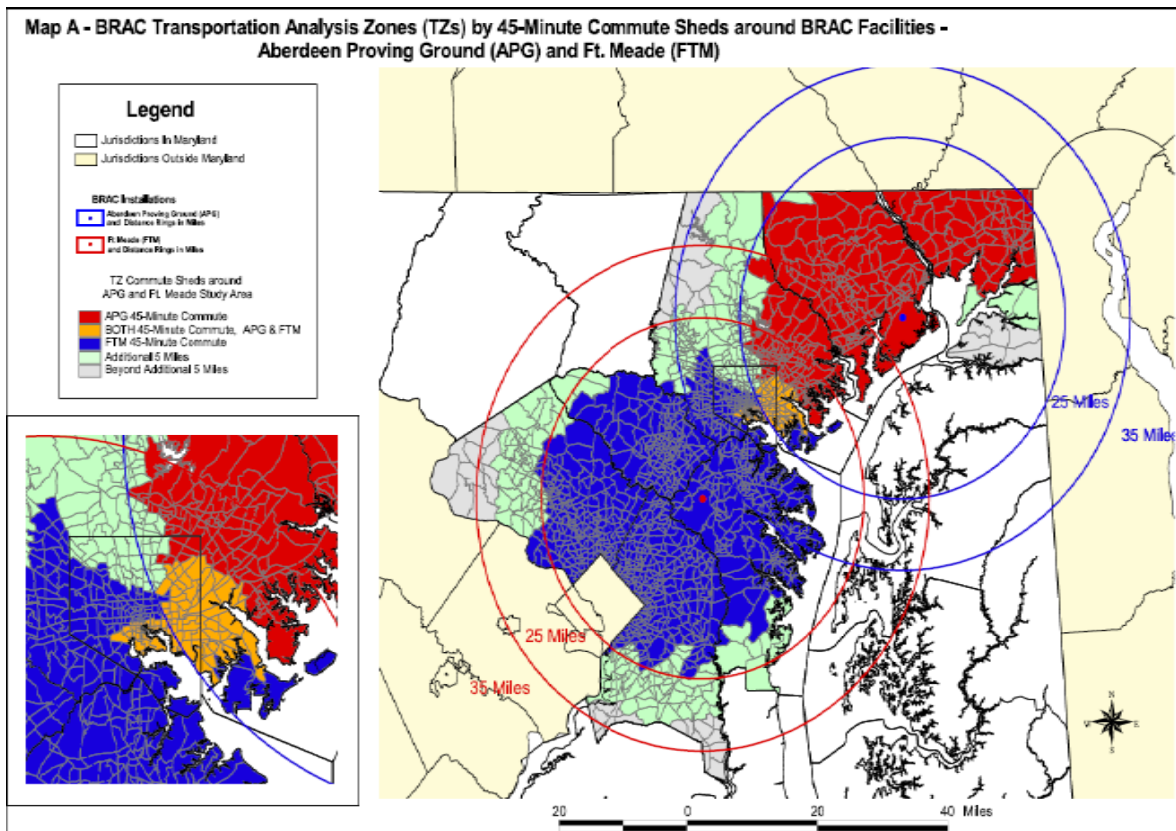
- **Infrastructure:** The Westport Waterfront's proximity to interstate highways, public transportation, downtown Baltimore, as well as connectivity to Baltimore-Washington International Airport, make it one of the most potentially economically competitive areas in the mid-Atlantic region. Existing highway networks connect the site to Washington D.C. and to the entire northeast corridor along I-95. With only modest infrastructure improvements, especially when compared to suburban Greenfield development otherwise occurring as a result of BRAC, the Westport Waterfront TOD contributes greatly to the metropolitan area's economic competitiveness. Funds from the TIGER grant will make these improvements possible.
- **Human Capital:** A growing public/private partnership has embraced the surrounding community and is developing a human capital strategy to ensure that existing residents thrive alongside the new development. To this end, the Westport Waterfront TOD includes a Workforce Development Center which will provide a wide range of services including job readiness and skills training, and long-term job retention and follow-up support. From this base of locally-developed capital, the TOD developer and its contractors have made a strong commitment to give residents a first opportunity for jobs created through the City's "Resident's First" program. The project also represents a commitment to diversity, having self-established a goal for minority- and women-owned business enterprise participation in site development of 30% MBE/10% WBE – higher than the City's usual goals for infrastructure contracts. Taken together, all of these components demonstrate a significant investment in local, disadvantaged residents in order to develop the community to its fullest potential.
- **Quality Places:** Designed to achieve the highest, Platinum-rating, under the US Green Building Council's LEED for Neighborhood Development program, the Westport Waterfront TOD redefines sustainable urban living. As a true mixed-use, transit-oriented center, the Westport Waterfront TOD offers a unique opportunity to live, work and play in one neighborhood with direct, car-free access to downtown and to regional destinations via light rail or bicycle. Westport will offer a diversity of housing options, too, with a binding commitment to create nearly 200 on- and off-site affordable housing units.
- **Innovation:** The strategic location of the Westport Waterfront TOD with its close proximity to two major defense installations and major universities provides an incredible opportunity to capture and concentrate the required knowledge-based industries associated with Base Realignment and Closure in a smart growth location that will minimize sprawl. Maryland has the second-highest share of the workforce with at least a bachelor's degree, is first in the percentage of the workforce with a graduate or professional degree, and first in doctoral scientists and engineers as a percentage of total employment.<sup>3</sup> **Westport Waterfront's development is critical to the City's ability to channel a significant portion of regional growth associated with the federal Base Realignment and Closure (BRAC) program into an area already served by infrastructure, rather than a Greenfield site that requires all new infrastructure.** In 2005, the federal base realignment decision called for Maryland's Aberdeen Proving Ground (APG) and Ft. Meade bases to absorb functions from two out-of-state bases that were slated for closure. The Westport Waterfront TOD is located halfway between APG and Fort Meade and within a reasonable commuting distance. Current estimates indicate that the State of Maryland could receive as many as 60,000 new jobs over the next decade. The

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<sup>3</sup> "2008 Community and Economic Impact Study: The Brains Behind Baltimore, How Higher Education is Driving the Region's Economic Future;" Baltimore Collegetown Network; Baltimore, MD. Page 7.



Westport Waterfront TOD presents an ideal location for firms working closely with either or both military installation and requiring easy access to Washington, DC (see Map A, below).



Maryland Governor Martin O'Malley awarded Westport one of the State's first "BRACZone" designations in 2008 providing tax incentives and technical assistance in recognition of the Westport Waterfront TOD's strategic importance in minimizing sprawl which could be associated with such a massive influx of jobs and residents to suburban military installations.

## I. Primary Selection Criteria: Long-Term Outcomes

### C. Livability

The Westport community has been a working class neighborhood that saw a massive decline in industry and residents after World War II. Geographically, the residential community is bisected by MD-295 and is separated from the waterfront by contaminated and vacant industrial properties. The community today is characterized by residential vacancy and social distress. The average life expectancy in the surrounding area is a full two years lower than the Citywide average; on 11 of 19 community health indicators, the area ranks within the lowest third (least healthy) of all communities.

<http://www.baltimorehealth.org/info/neighborhood/55%20Westport.pdf>

Rather than leading to displacement and gentrification, the Westport Waterfront TOD is playing a lead role in helping to strengthen surrounding communities and existing residents. To this end, rebuilding the neighborhood's social and civic infrastructure has been an important early effort of the Westport Waterfront TOD. The developers of the Westport Waterfront TOD are working with a diverse group of public, non-profit, foundation and private partners to rebuild the organizational capacity of the

community, strengthen civic institutions, promote workforce and youth development, and plan for the physical revitalization of the surrounding neighborhood. In addition, the Westport Waterfront TOD will greatly improve the current health of residents by promoting walkability, improved air quality and access to better quality food and services through new pedestrian and bicycle friendly connections, mixed-use development and environmental restoration both in the TOD and surrounding neighborhood.

Additional detail on community partnerships can be found in Section IV - Secondary Selection Criteria: Partnerships.

As the project moves toward the physical development stage, improving the neighborhood's transportation infrastructure is the next priority. The Westport project will provide transportation improvements that are critical to the redevelopment of vacant and underutilized industrial property in the Westport, Mt. Winans, Lakeland, and Cherry Hill neighborhoods. New development made possible by transportation improvements will provide direct opportunities for local residents to find entry- to mid-level employment opportunities in construction, retail and hotel jobs.

The Westport Waterfront TOD's investment into new, light rail station enhancements, bike paths, MD 295 interchanges, and feeder street improvements will enhance and extend connections between the existing Light Rail, bike path and street network providing new and/or easier access for residents in the surrounding communities to jobs, civic institutions and shopping. The rehabilitation of the CSX swing bridge as part of the Gwynns Falls Trail will allow community members to access neighborhoods to the east without having to walk or bicycle along major streets. Improvements will also allow users to access existing employment and service centers along the Light Rail Line and the existing 15-mile Gwynns Falls bike trail. New pedestrian bridges, parks, piers, and bike trails will bring new recreational opportunities to the surrounding neighborhoods and the larger region.

## I. Primary Selection Criteria: Long-Term Outcomes

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### D. Sustainability

The Westport Waterfront TOD will catalyze the restoration of the long-neglected Middle Branch of the Patapsco River and serve as a model for future development along the 6-mile waterfront. The Westport TOD integrates smart growth, urban design, and green building techniques into the design of the 50-acre TOD and the construction of 4.8 million square feet of mixed-use buildings. The Westport Waterfront TOD is committed to achieving the highest "platinum" rating under the new LEED for Neighborhood Development (LEED ND) program of the US Green Building Council. A unique partnership between public, private, and non-profit organizations is also focused on restoring the environment in the surrounding neighborhoods through tree planting, contamination remediation, and habitat restoration.

The elements of Westport Waterfront TOD's LEED for Neighborhood Development (LEED ND) program include:

- **Smart Location and Linkage:** The Westport Waterfront TOD conserves natural and financial resources by locating in an area already well-served by public infrastructure and transit. Westport Waterfront TOD is directly served by Baltimore's Light Rail transit line that stretches north from City Center to Hunt Valley and south from City Center to BWI Thurgood Marshall Airport in Hanover, Maryland.

- **Neighborhood Pattern and Design:** The Westport Waterfront TOD utilizes pedestrian-friendly, urban design that is focused on mixed-use development that provides walkable access to goods and services. TIGER funds will be used to extend the Gwynn's Falls Trail onto the site and extend the trail across the Middle Branch via an abandoned swing-bridge owned by CSX. New street connections extend from the existing neighborhood to the waterfront. In addition, the creation of a soft-edge waterfront will include eight acres of protected habitat and forest conservation areas, the planting of 70,000 trees, shrubs, and plants, and a system of recreated wetlands and 16-foot wide, heavily planted dry swales that clean storm water runoff before it enters the Chesapeake Bay.
- **Green Construction and Technology:** The Westport Waterfront TOD employs green building techniques. These include high performance street lights that are energy efficient, the use of recycled materials and pervious asphalt. LEED certified buildings will reduce energy use by 24% and water use by 30%.

The results of this sustainable development plan can be seen in two particular quantitative analyses: the first relating to auto emissions, fuel consumption and air quality; and, the second relating to the environmental quality.

Concentrating development in a high-density urban area that is served by multiple transit modes will reduce automobile dependence, greenhouse gas emissions, and negative effects on the environment. The Westport Waterfront TOD will reduce vehicle trips by connecting directly to the existing Light Rail station and walk/bike paths. Weekday boardings currently average approximately 650 (2008 MTA). Projected weekday boardings could exceed 1,600 based on the Traffic Impact Study data and the assumption of a long-term modal split of 30%. Consolidating living, shops and office space within a convenient area will also reduce vehicle trips. Given the density and size of the project, the increase in transit ridership will further enhance air quality, reduce automobile dependence, and benefit the environment.

The table below highlights the reductions in emissions associated with the the Westport Waterfront TOD project and the associated transportation improvements. SimTraffic was used to evaluate fuel consumption and compare green house gas emissions for the two conditions (existing traffic volumes with and without the proposed transportation infrastructure improvements). The model calculates fuel consumption and levels of emissions based on vehicle speed and acceleration. The modal split is 15%.

**Table 3: Change in Emissions**

Sustainability Category	AM Peak Hour			PM Peak Hour		
	Without	With	% Diff	Without	With	% Diff
Fuel Used (gallons/hour)	289.2	279.6	<b>-3.32%</b>	351.4	241.9	<b>-31.16%</b>
HC Emissions (grams/hour)	2,342	2,611	<b>11.49%</b>	2,507	2,293	<b>-8.54%</b>
CO Emissions (grams/hour)	68,978	71,421	<b>3.54%</b>	69,331	64,094	<b>-7.55%</b>
NOx Emissions (grams/hour)	7,873	8,347	<b>6.02%</b>	7,245	7,728	<b>6.67%</b>

In the table above, the reduction in emissions and improved air quality is a direct result of the transportation infrastructure improvements. In certain circumstances, capacity improvements may increase fuel and air emissions since vehicles will consume more fuel. In addition, several new traffic signals are proposed that now require vehicles on the mainline to start and stop, thus increasing the fuel consumption and emissions. This is likely the reason why there is degradation in emissions during certain hours.

Second, the aggressive habitat restoration, wetlands creation and storm water management program will lead to positive long-term environmental benefits, helping the City achieve its goal of making the Middle Branch swimmable and fishable by 2020 and improving overall habitat. Water quality scores over the past 20 years for the Patapsco River have been consistently poor, rating at D- with showing no signs of improving. Elements include:

- Restoration of coastal and marine habitat to benefit species of concern by stabilizing approximately 1,200 linear feet of existing eroding shoreline with rip rap and creating .37 acres of fringe wetlands contiguous to a newly expanded habitat conservation area;
- Reduction of nitrogen, phosphorous, and sediment pollutants from entering the Middle Branch through the use of porous paving for the multipurpose trail, the use of a dry swale system along John Moale Boulevard and the expansion and reconstruction of the Kloman Swale; and
- Installation of a trash interceptor at the Smith Cove outfall that is expected to remove upwards of 17,400 lbs of solid waste trash per year representing 17% of the total trash debris entering the Middle Branch.

The Bay Health Index, prepared by the NOAA Chesapeake Bay Office and the University of Maryland Center for Environmental Sciences (UMCES), has graded water quality at the Westport Waterfront TOD area a D-. For more information on the health of the Middle Branch, see: [http://www.eco-check.org/reportcard/chesapeake/2008/summaries/patapsco\\_back\\_rivers/](http://www.eco-check.org/reportcard/chesapeake/2008/summaries/patapsco_back_rivers/)

## **I. Primary Selection Criteria: Long-Term Outcomes**

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### **E. Safety**

Transportation investments associated with the Westport Waterfront TOD provide much needed safety improvements as the area transitions from low-volume industrial land uses to higher-volume commercial and residential land uses. TIGER funds will be used to:

- Construct a new pedestrian bridge at the Westport light rail station, thereby eliminating the need for an at-grade pedestrian crossing of the CSX tracks; and rehabilitate the pedestrian bridge over MD 295 to improve both pedestrian access and safety between neighborhoods that are currently bisected by the roadway.
- Upgrade safety features at several railroad crossings near the site to enhance both pedestrian and vehicular safety. These will include fencing and Closed Circuit TV improvements, as well as gate and signal improvements. Rail crossings at Waterview Avenue, Wenburn Avenue, and Manokin Street are being targeted for these safety improvements.
- Construct off-site roadway improvements to eliminate several substandard design features of the freeways and ramps, and improve safety at intersections serving the neighborhood. The proposed ramp improvements at various interchanges along MD 295 will increase the length of the acceleration and deceleration lanes. In addition, the lane configuration along southbound MD 295 will be modified to simplify the existing weaving configuration and reduce the required number of lane changes. Several intersection improvements include construction of new turn lanes, modifying existing or adding new signal phases and installing new signals. The crash reduction potential of the specific improvements is presented in the table below:

**Table 4: Crash Reduction Factors**

Infrastructure Improvements	Crash Reduction Factor (%)
Annapolis Rd./Waterview Ave./Russell St. Interchange Improvements (Roadway): Widen Ramp, Increase acceleration lane length	26
Extend NB MD 295 Deceleration Lane to Waterview Avenue	26
Widen NB MD 295 Ramp to Waterview Avenue	26
Extend SB MD 295 On-Ramp from Annapolis Road	26
SB MD 295/SB I-95 to Annapolis Road (Reduce Lanes)	26
Annapolis Road/Monroe Street: Signal Phasing Modification, Install a Left-Turn Lane	58
Annapolis Road/Clare Street: Install a New Signal	20
Annapolis Road/Manokin Street: Signal Phasing Modification, Install a Right-Turn Lane	28
Manokin Street - One-way conversion	43
Wenburn Street - One-way conversion	26
Annapolis Road/Russell Street Exit Ramp from NB I-95: Widen to provide right-turn lane	26
Waterview Avenue Resurfacing	33
Kent Street Light Rail Pedestrian Bridge	13

Source: *Desktop Reference for Crash Reduction Factors; Report No. FHWA-SA-08-011, Sep '08*

Based on the crash reduction factors cited in the table above, a 13-58% reduction in crashes can be expected from the proposed off-site transportation infrastructure improvements. Crash data and police reports for three years from 2005 to 2007 were available from the Baltimore City Department of Transportation for various intersections and roadways with planned improvements. A benefit to cost ratio was calculated based on the number and type of correctable crashes at each intersection, the cost for intersection improvements, and the crash reduction factors shown in the table below.

**Table 5: Summary of Benefit-Cost Ratio Calculations**

Infrastructure Improvements	Correctable Crashes	Improvement Costs	Crash Reduction Factor (%)	B/C Ratio
Annapolis Road at Manokin Street	5	\$360,000	28	0.47
Annapolis Road at Monroe Street	3	\$720,000	58	0.60
Annapolis Road at Clare Street	6	\$360,000	20	0.55
Annapolis Road at Wenburn Street	5	\$290,000	43	0.31
BW Parkway/Russell Street (0.87 mile roadway segment, roadway Improvements Only)	39	\$9,980,000	26	0.12

As shown in table above, it is estimated that 58 crashes are potentially correctable by the proposed improvements. Although the benefit-to-cost ratio for each of the proposed improvements is less than 1.0, it is important to note that they were developed to primarily address capacity constraints. Any potential reduction in crashes is an added benefit.

Finally, as part of the City's overall transportation program, although not considered as part of this application, the City and Developer intend to:

- Upgrade sidewalks and sidewalk ramps to improve ADA access within and around the site.
- Add Westport Elementary/Middle School to its Safe Routes to Schools and Operation LifeSaver programs, as traffic begins to increase from nearby development.

In addition to vehicular and pedestrian safety, the Developer's remediation of the Brownfield site will eliminate the potential of unintended release of hazardous materials, particularly those that might enter City of Baltimore, Department of Transportation -- Westport Waterfront TIGER Application



the Middle Branch tributary of the Chesapeake Bay, helping to preserve one of Maryland's greatest natural resources.

## II. Primary Selection Criteria: Job Creation & Economic Stimulus

### A. Quickly Create and Preserve Jobs and Rapid Increase in Economic Activity

With the TIGER investment and other existing funding sources, the City of Baltimore and the Developer are ready to advertise projects for construction within 30-90 days of grant notification. Within two years of grant notification, the total projected amount spent on the transportation infrastructure program will be approximately \$116.9 million, which includes the \$35.5 million TIGER grant request. In addition, the transportation program will leverage \$189.5 million of private building development scheduled to be completed by 2013.

Long-term, after the initial transportation program is completed in 2012, another \$76,471,075 of transportation improvements will be invested to complete the build out of the TOD. This allows 3.6 million square feet of buildings to be completed by 2020, representing an additional \$539.8 million in construction expenditures.

The Westport Waterfront TOD generates significant construction jobs during the 2-year infrastructure construction. Below is a **quarterly breakdown of the 1,070, one-year, direct jobs created from the public infrastructure and private building development under construction within 2 years from TIGER Notice to Proceed.**

**Table 6: Total Estimated On-Project One Year Job Starts per Quarter**

2 <sup>nd</sup> Q 2010	3 <sup>rd</sup> Q 2010	4 <sup>th</sup> Q 2010	1 <sup>st</sup> Q 2011	2 <sup>nd</sup> Q 2011	3 <sup>rd</sup> Q 2011	4 <sup>rd</sup> Q 2011	1 <sup>st</sup> Q 2012	Total
27	76	134	152	158	215	154	154	1,070

Source: STV, September 2009. Note: Construction jobs are estimated based on Full-Time Equivalent for a one-year period.

Upon the completion of the full build-out of the Westport Waterfront TOD, more than \$1.2 billion of private investment and 15,000 permanent jobs will have been created by the project. Table 7 below shows the mid and long-term temporary and permanent jobs made possible by the initial transportation program investment.

**Table 7: Mid and Long-Term Jobs Created**

Type of Job	2012- 2015	2015- 2020	Total
<b>Temporary 1-Year Jobs</b>			
Infrastructure	655	n/a	655
Private Building Development	1,035	2,316	3,351
<b>Total</b>	<b>1,690</b>	<b>1,390</b>	<b>4,006</b>
<b>Permanent Jobs</b>			
Office Direct	2,597	5,516	8,113
Hotel Direct	n/a	307	307
Retail Direct	320	360	680
Indirect	2,073	4,475	6,548
<b>Total</b>	<b>4,990</b>	<b>10,658</b>	<b>15,648</b>

Source: Municap, July 2009

Both Baltimore City and the TOD developer have a strong commitment to community hiring and utilization of minority/women (MBE/WBE) and disadvantaged firms. To this end the Westport Waterfront TOD includes a workforce development center that will serve as a central location for non-profit workforce development programs, such as ABC's ProjectJUMPSTART (construction job placement), Living Classrooms PROJECT SERVE (employing residents in housing rehabilitation) and Parks & People's Clean & Green Program (hiring young adults to promote and clean community areas and waterfront). In addition, the City and the TOD developer are committed to MBE and WBE participation in the site development. Taken together, all of these components demonstrate a significant investment in local, disadvantaged residents and business in order to ensure the surrounding community directly benefits from new investment.

## **II. Primary Selection Criteria: Job Creation & Economic Stimulus**

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### **B. Benefit Economically Distressed Areas**

The Westport Waterfront transit oriented development is a public-private partnership which kicks off implementation of Baltimore City's Middle Branch Master Plan. Adopted in 2007, the Middle Branch Plan aims to redevelop and revitalize the Middle Branch estuary and waterfront as a mixed-use community through economic and community redevelopment, ecosystem restoration and protection, and recreation and education programs. For more information, see [www.ci.baltimore.md.us/government/planning/middleBranchMasterPlan.php](http://www.ci.baltimore.md.us/government/planning/middleBranchMasterPlan.php). The Middle Branch represents Baltimore's next focus area of investment which will build off of the success of the Inner Harbor redevelopment and capitalize on BRAC-related growth in the region. As an EDA, Baltimore City will benefit from the significant new tax revenue, investment and jobs generated by the Westport TOD. Tax revenues are projected to include \$24 million per year in incremental real property taxes and \$18.5 million per year in personal income tax, personal property tax, and hotel occupancy taxes (Source: Municap 2009).

The surrounding communities of Westport/Mount Winans/Lakeland/Cherry Hill are together some of the City's most economically distressed areas. Of the City's 55 designated neighborhoods, these communities rank in the bottom third of more than half of City's key health indicators including life expectancy (40) and homicide (43). The neighborhoods are also in the lower half for infant mortality rate (27). (Source: Baltimore City Health Department, <http://www.baltimorehealth.org/info/neighborhood/55%20Westport.pdf>)

In 2008, the median household income in the area was \$28,346. As of June 2009, unemployment is high at 14.4% when compared to 9.4% nationally, and 43.8% of the population over the age of 16 were not part of the labor force at all. 37% of residents are living in poverty. In addition to high unemployment, the community suffers from declining home-ownership and increased vacancy, with 22.2% of the houses vacant, representing a 119% increase since the 1990 Census. Only 26% of the housing units are owner occupied compared to 43% for the rest of Baltimore City. The neighborhood is severely underserved in terms of employment centers and basic goods and services. (Sources: Baltimore City Health Department and 1990/2000 Census Data).

The injection of over 15,000 retail, office and hotel jobs will directly benefit the Westport, Mount Winans and Lakeland neighborhoods. The addition of 2,000 market rate and 200 affordable housing units will increase property values in a struggling housing market.

However, new private and public investment and improved infrastructure is not always enough to improve the quality of life in a distressed area. As such, the City of Baltimore and Westport TOD are

working to lift up and support the surrounding community through physical revitalization, workforce development and new economic opportunities for residents.

## II. Primary Selection Criteria: Job Creation & Economic Stimulus

### C. Project Schedule

With strong political and community support, the Westport Waterfront TOD has followed an aggressive schedule. Project planning took place from 2007-2009, with the project receiving City Council approval on November 27, 2007. Acquisition has been fully completed for the TOD and no right-of-way is needed (other than temporary construction easements) for the projects associated with the TIGER grant. Preliminary design (and in some cases final design) has been completed for projects #1-11 in Table 8. Design has been completed and permits have been obtained for projects #12-14.

The table below demonstrates that the Westport Waterfront project is truly shovel-ready. Advertisement for on-site infrastructure improvements can begin within 30-90 days of grant approval and will require two years to complete. Advertisement of off-site improvements can also begin within the same time frame, but some projects will lag until Fall of 2010 as projects complete final design and approval. The City of Baltimore, in cooperation with the Maryland State Highway Administration (which accepts stewardship responsibility for the City's federal-aid program), has a strong track record of advertising projects on-schedule; 24 of 27 projects scheduled for advertisement in anticipation of the 2009 construction season were advertised on-schedule. All projects will be substantially completed by December 2011.

**Table 8: Project Schedule**  
(All Projects Have Completed Preliminary Engineering)

Proposed Improvements	Cost (in millions)	Estimated Advertisement Date
1. MD 295/Annapolis Rd/Waterview Ave: Interchange and ramp improvements	6.02	November 2010
2. SB MD 295 to Annapolis Rd: Ramp improvements	1.44	November 2010
3. SB MD 295, I-95 to Annapolis Rd: Lane revising to improve weaving	2.16	November 2010
4. Annapolis Rd – A) Monroe St: New turn lane and turn signal; B) Clare St: New turn lane and signal; C) Manokin St: New turn lane and signal	1.44	June 2010
5. A) Manokin St: Convert to two 1-way lanes; B) Wenburn St: Convert to two 1-way lanes	0.65	June 2010
6. Annapolis Rd/Russell St: Widen for new lane for NB I-95 ramp traffic to turn on Annapolis Rd	0.36	November 2010
7. Light Rail Station: A) Light Rail station enhancements; B) Kent Street Pedestrian Bridge: Construct pedestrian bridge across CSX tracks	3.00	September 2010
8. Kloman Street Multipurpose Trail: Convert roadway into Gwynns Falls trail extension	0.50	May 2010
9. CSX Swing Bridge: Structural rehabilitation to support pedestrian/bike trail	5.00	October 2010
10. Waterview Ave: Resurfacing and base repairs	1.25	May 2010

11. CSX Grade-Crossing Improvements: A) Wenburn St; B) Waterview Ave; C) Manokin St	0.50	May 2010
12. A) Waterview/John Moale Blvd: Install new signal; B) John Moale Blvd/Wenburn St: Install new signal; C) John Moale Blvd: Construct new road	10.15	May 2010
13. Pedestrian bicycle trail construction and enhancements	0.34	May 2010
14. Public electric conduit and street lighting improvements	2.71	May 2010
<b>Total Improvements</b>	<b>35.53</b>	<b>All projects to be completed by December 2011</b>

## II. Primary Selection Criteria: Job Creation & Economic Stimulus

### D. Environmental Approvals

In addition to its significant economic benefits, the Westport Waterfront TOD will catalyze efforts to restore the habitat and ecosystem of a major estuary feeding the Chesapeake Bay. Given the nature of the Westport Waterfront site, significant environmental planning and documentation has occurred to date. This significantly improves the project's ability to quickly and effectively enter and complete the NEPA process for projects #12-14, as shown in Table 8. This project is confident in completing NEPA by May 2010 given the extent of data collection and environmental approvals already in place. In addition, the City has received, or expects to receive, a Categorical Exclusion for projects #1-11.

To date, the following local, state and federal environmental and development approvals for projects #12-14 received include:

- Mass Grading Permit (Phase I): Obtained on February 12, 2009
- Storm Water Management Master Plan: Approved on April 30, 2009
- Wetland Impact Permits: All permits for construction of the Shoreline Wetlands and non-tidal impacts have been obtained from the Maryland Department of Environment, the US Army Corps of Engineers, Critical Area Commission, and City of Baltimore. The final permit for construction was received on July 1, 2009. The Permits include:
  - Tidal Wetland Licenses 06-0393-R.: Approved January 5, 2009
  - Dept of Army Permit CENAB-PO-RMN: Approved March 25, 2007
  - Dept of Army Letter of Authorization: Approved January 29, 2009

To the extent that higher-level NEPA approvals are required to proceed with any individual project, the development team and the City of Baltimore have a comprehensive environmental database that can be used to satisfy NEPA requirements. **Importantly, no new studies or field data collections are anticipated, given the data already assembled.** Resource topics for which significant data collection, and in some cases impact analysis, that have been completed include:

- Storm Water
- Floodplains
- Wetlands
- RTE species
- Vegetation
- Wildlife
- Historic and Archaeological resources
- Hazardous Materials

- Chesapeake Bay Critical Area
- Geology
- Topography
- Soils
- Groundwater
- Surface Water
- Aesthetics
- Recreation
- Section 4F Lands (Parks & Recreation Land, and Cultural)
- Land Use
- Utilities
- Public Services
- Socio- Economic
- Coastal Zone
- Climate

## II. Primary Selection Criteria: Job Creation & Economic Stimulus

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### E. Legislative Approvals

The Westport Waterfront TOD has received all necessary legislative approvals. Approvals received to date include:

- The City of Baltimore adopted Planned Unit Development and Zoning approvals for the TOD in 2007.
  - Ordinance 07-609: <http://legistar.baltimorecitycouncil.com/attachments/2081.pdf>
  - Ordinance 07-608: <http://legistar.baltimorecitycouncil.com/attachments/2080.pdf>
- Three ordinances creating a Tax Increment Financing District and borrowing authority were adopted in 2008 for the TOD.
  - Council Bill 08-94: <http://legistar.baltimorecitycouncil.com/detailreport/?key=4030>
  - Council Bill 08-95: <http://legistar.baltimorecitycouncil.com/detailreport/?key=4031>
  - Council Bill 08-96: <http://legistar.baltimorecitycouncil.com/detailreport/?key=4032>

## II. Primary Selection Criteria: Job Creation & Economic Stimulus

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### F. State and Local Planning

The Westport TOD project is strongly supported by state and local government. It has been identified as a priority project in the following local planning documents:

- Baltimore's Comprehensive Master Plan of 2007
  - [www.baltimorecity.gov/government/planning/compplan/](http://www.baltimorecity.gov/government/planning/compplan/)
- Baltimore Enterprise Zone
  - [www.baltimoredevelopment.com/assistance/enterprise.aspx](http://www.baltimoredevelopment.com/assistance/enterprise.aspx)
- Middle Branch Master Plan
  - [www.ci.baltimore.md.us/government/planning/middleBranchMasterPlan.php](http://www.ci.baltimore.md.us/government/planning/middleBranchMasterPlan.php)
- City of Baltimore Comprehensive Economic Development Strategy 2008
  - [www.ci.baltimore.md.us/.../111208\\_CEDS\\_evaluation\\_indicators\\_presentation\\_BNIA\\_Nov6th.pdf](http://www.ci.baltimore.md.us/.../111208_CEDS_evaluation_indicators_presentation_BNIA_Nov6th.pdf)
- Middle Branch Transportation Plan
  - [www.baltimorecity.gov/.../transportation/.../022409\\_Middle%20Branch%20Presentation.pdf](http://www.baltimorecity.gov/.../transportation/.../022409_Middle%20Branch%20Presentation.pdf)
- Westport/Mount Winans/Lakeland Master Plan
  - [www.ci.baltimore.md.us/government/planning/images/WestportMtWinansLakelandMP.pdf](http://www.ci.baltimore.md.us/government/planning/images/WestportMtWinansLakelandMP.pdf)



- Baltimore Regional Transportation Board Letter of Support
  - [www.baltimorecity.gov/government/transportation/tiger.php](http://www.baltimorecity.gov/government/transportation/tiger.php)

In addition, consistency is achieved with the Baltimore Region Transportation Plan, *Outlook 2035: Baltimore Region Constrained Long Range Plan (CLRP)* [www.baltometro.org/content/view/1019](http://www.baltometro.org/content/view/1019) and the MPO governing board has expressed its support for the project in a letter ([www.baltimorecity.gov/government/transportation/tiger.php](http://www.baltimorecity.gov/government/transportation/tiger.php)). Adding TIGER funds to the CLRP, TIP/STIP can occur within 30 – 45 days of grant award.

The Westport Waterfront TOD has also been and the identified as a priority in the following state documents:

- FY 2009-2014 Consolidated Transportation Program
  - [www.mdot.state.md.us/Planning/CTP09-14/Index](http://www.mdot.state.md.us/Planning/CTP09-14/Index)
- BRAC Zone Designation:
  - <http://www.ci.baltimore.md.us/mayor/downloads/BRACtion%20Plan.pdf>
- Statewide Transportation Improvement Program
  - [www.mdot.state.md.us/Planning/STIPandTIP/2008STIP.pdf](http://www.mdot.state.md.us/Planning/STIPandTIP/2008STIP.pdf)
- 2009 Maryland Transportation Plan
  - [www.mdot.state.md.us/Planning/Plans%20Programs%20Reports/Reports/MTP/09MTP.pdf](http://www.mdot.state.md.us/Planning/Plans%20Programs%20Reports/Reports/MTP/09MTP.pdf)
- 2007 City of Baltimore Priority Letter to Maryland Department of Transportation
  - [www.mdot.state.md.us/Planning/County\\_Priority\\_Letters/Index.html](http://www.mdot.state.md.us/Planning/County_Priority_Letters/Index.html)
- State of Maryland BRAC Action Plan
  - [www.brac.maryland.gov/documents/2007bracActionPlan.pdf](http://www.brac.maryland.gov/documents/2007bracActionPlan.pdf)
- Maryland Climate Action Plan
  - [www.mde.state.md.us/assets/document/Air/ClimateChange/Appendix\\_D\\_Mitigation.pdf](http://www.mde.state.md.us/assets/document/Air/ClimateChange/Appendix_D_Mitigation.pdf)
- 2009 Maryland Trails: Strategic Implementation Plan
  - [www.mdot.state.md.us/Planning/TSIP/index.html](http://www.mdot.state.md.us/Planning/TSIP/index.html)
- 20-Year Bicycle & Pedestrian Access Master Plan
  - [www.mdot.state.md.us/Planning/Bicycle/FINALB.pdf](http://www.mdot.state.md.us/Planning/Bicycle/FINALB.pdf)

## II. Primary Selection Criteria: Job Creation & Economic Stimulus

### G. Technical Feasibility

The Westport Waterfront project and its associated transportation elements are the product of a comprehensive master plan for the Middle Branch area, an aggressive and enlightened development approach by the private-sector, and public sector collaboration in reserving tax increment financing, developing traffic management plans, and partnerships in environmental remediation. The Middle Branch Transportation Comprehensive Plan assessed the area's multi-modal transportation network for issues of capacity, quality, and safety, based on existing travel conditions and land uses, and to identify transportation system improvements based on future development potential. Since 2006, the private sector development team and public partners from dozens of local, state and federal agencies have worked together to firmly establish the project's technical feasibility. All systems are "go" once the final gap in the financial package is resolved.

Fully engineered construction documents have been approved by the City of Baltimore, which include design of the public infrastructure (roads, water, sanitary sewer, conduit systems, stormwater and street lighting) necessary to support the Phase I build-out development program of the TOD. Traffic engineers have prepared a traffic simulation model to project total peak hour traffic volumes and evaluate measures of traffic control within the development to establish roadway geometry and intersection signalization design. A Traffic Impact Study (TIS) has been performed by the City's Department of Transportation and a traffic mitigation plan accepted. In 2008, the Baltimore City Council also approved \$160 million in Tax Increment Financing (TIF), the largest TIF in Baltimore's history, to fund the construction and installation of the public infrastructure.

A team of wildlife biologists, environmental engineers, environmental attorneys and landscape architects has secured complex regulatory approvals and permits for the infrastructure and vertical development in the first phase of the TOD. These approvals include brownfield clean-up, critical area restoration and tidal and non-tidal flood plain mitigation. The site required careful planning to meet the goals of the State of Maryland's Critical Area program which aims to improve water quality, forest cover and wildlife habitat in the Chesapeake Bay watershed. The approved storm water management master plan creates a holistic framework for implementing best management practices for water quality for the project.

## II. Primary Selection Criteria: Job Creation & Economic Stimulus

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### H. Financial Feasibility

The City of Baltimore and the Westport Waterfront TOD development team have developed a multi-pronged financial plan to advance the project into construction. Rigorous financial analysis by Municap, Praeger/Seely, and the City's Finance Department have validated the financial feasibility of the bond sales; the City's Capital Improvement Program already includes the federal and state funds listed below, except for the \$5 million in local highway user revenues which will be programmed for City FY11 and FY12. For nearly 30 years, Baltimore City has managed its own Federal Administration highway projects without having an adverse audit finding.

- **Tax Increment Financing/Recovery Zone Bonds (\$84,828,482)** – The City of Baltimore has created a TIF district for the Westport Waterfront TOD area. The legislation approved the sale of municipal bonds, valued at \$157.1 million (\$106 million net of issuance costs), which would be repaid through the City's collection of incremental real property taxes in the District. As noted above, ongoing turmoil in the municipal bond market has prevented the City from issuing the full amount TIF bonds at this time; there is a growing consensus that some level of TIF bonds may be able to be sold in the next 12 months. If the TIF bonds can not be issued in a timely manner, the City has committed its allocation of Recovery Zone Economic Development Bonds to the project. These funds would be used for site work, private infrastructure and utilities, etc., as well as public infrastructure (roads, stormwater management, etc.) It is anticipated that the TIF bonds will be issued in two tranches. The first allocation of \$7.9 million will be for improvements to neighborhood collector streets, utility and public space improvements. The second allocation of \$69.3 million will be for minor arterial construction, trail and marina improvements.
- **Federal Funds (\$20,100,000)** – The City receives an annual share of approximately 5.5% of the State of Maryland's apportionment of federal-aid highway funds, spread across multiple categories (Bridge Rehab and Replacement, Interstate Maintenance, Surface Transportation, National Highway System, etc.) From this annual allocation, the City has programmed \$20.1 million in Bridge Rehabilitation and Replacement funds and Surface Transportation Program funds to advance the three bridge projects described above.
- **State Funds (\$2,959,000)** – The Maryland Department of Business and Economic Development has provided more than \$1.6 million in brownfield remediation funds for the transit-oriented development. In addition, the Maryland Department of the Environment has committed more than \$1.3 million for innovative stormwater management practices in the TOD from the Clean Water Revolving Fund.
- **Private Debt and Equity (\$45,000,000)** – Turner Development, the Carlyle Group, and others have thus far invested approximately \$40 million in site acquisition/assembly, demolition, remediation and soft costs. An additional \$5 million will be invested in private site work and other soft costs as the public infrastructure starts to be constructed.
- **Local Funds (\$5,000,000)** – The State of Maryland allocates, by formula, 30% of all Highway User Revenues (HUR) (gas taxes, titling fees, etc.) to local governments. In turn, the City receives 12.25% of the local HUR distribution, which is used for both operating and capital expenses of

the City's Department of Transportation. Of this annual allocation, the City is committing \$5,000,000 toward road resurfacing and repair in communities adjacent to the TOD.

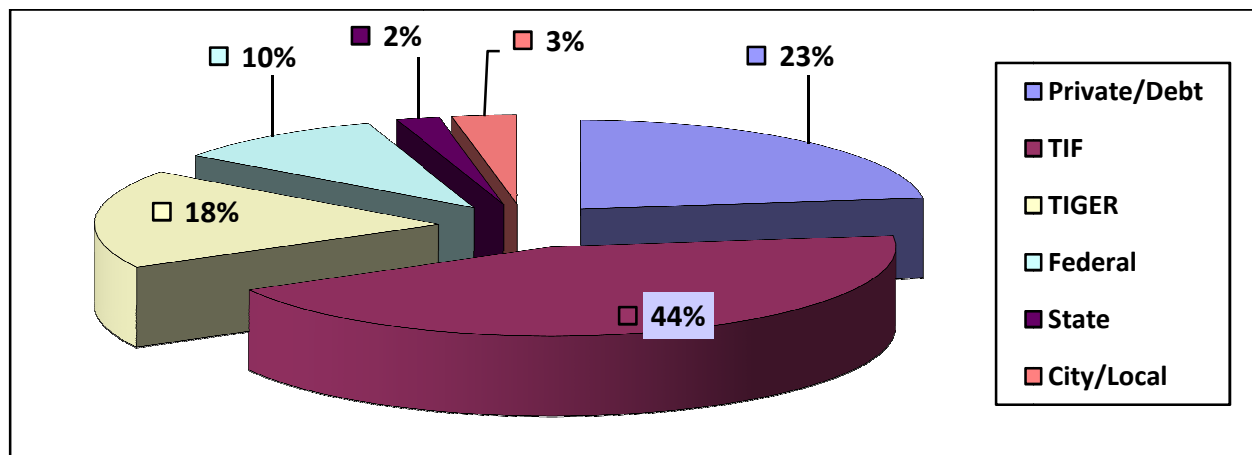
- **TIGER Funds (\$35,530,274)** – The City of Baltimore is requesting \$35.5 million in TIGER funds to fill a portion of the gap between what the City had expected to be able to issue in TIF bonds and the City's allocation under the Recovery Zone Economic Development Bond program. The TIGER grant represents "but for" funding that will allow the TOD to move forward.

Baltimore City DOT will be working through the Maryland SHA in managing the construction contracts to ensure that the budget does not exceed the allowable sources.

The following table identifies the Sources and Uses for the Westport Waterfront TOD.

**Table 9: Total Sources & Uses**

Sources	Use	Amount	%
Private/Debt	Private Electric/Acquisition/Demo	\$45,000,000	23%
TIF	Neighborhood Streets, Open Spaces, Marine Improvements, Stormwater Management	\$84,828,482	44%
TIGER	MD 295 Ramp Improvements, Light Rail Station, Bike Path, New Minor Arterial	\$35,530,274	18%
Federal	Bridge Replacement	\$20,100,000	10%
State	Brownfield/ Storm Water Management	\$2,959,000	2%
City/Local	Pavement Management	\$5,000,000	3%
<b>Total Sources</b>		<b>\$193,417,756</b>	<b>100%</b>



### **III. Secondary Selection Criteria: Innovation**

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#### **A. Stormwater Management & Transportation Demand Management**

Stormwater Management and Transportation Demand Management are two primary areas of innovation for the Westport Waterfront TOD.

A non-traditional approach was used for mitigating potential non-tidal flooding. The northern half of the project site is located within the Gwynns Falls non-tidal floodplain. The projected 100-year flood flows across the site are approximately 12,400 cfs. Floodwaters and upstream impacts were avoided by raising the development site up to 10 feet in elevation and widening an existing swale along the northern portion of the site by 75 feet. The widened swale will enhance water quality and wildlife habitat and create 26,000 square feet of tidal wetlands. A proposed 120-foot long pedestrian bridge links both sides of the swale and connects to the Gwynns Falls trail—a 15-mile hike and bike trail that connects more than 30 neighborhoods to downtown Baltimore. With its focus on innovate habitat restoration and creative solutions, this waterfront transit-oriented development will be a new national model for urban waterfront development.

In developing the traffic mitigation plan for the Westport Waterfront Planned Unit Development, the City and the Developer agreed to set a goal of 30% of all trips generated by the project to be by other than single occupant vehicles. Both parties agreed that achieving this goal would be unprecedented for the Baltimore region – not even the central business district has a 30% mode split. Setting this goal required two actions: significant joint investment in the transit, bicycle and pedestrian infrastructure of the area, and an innovative and aggressive set of parking management tools which would be binding and enforceable. To this end:

- Shared parking standards were adopted for the first time by the City of Baltimore to reduce the amount of on-site parking needed for each individual development project, and
- A \$1,000 per parking space contribution will be made to a Transportation Management Association (TMA) to be formed for the Middle Branch redevelopment area. The contribution is triggered when the number of parking spaces exceeds a pre-determined threshold by development type. The TMA will promote non-single vehicle occupant use including transit, flex car, bike, and commuter programs.

### **IV. Secondary Selection Criteria: Partnerships**

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#### **A. Jurisdictional & Stakeholder Collaboration & Disciplinary Integration**

The Westport Waterfront TOD demonstrates a remarkable collaboration of stakeholders from the real estate, environmental, transportation, economic development and housing and community development sectors representing for-profit, non-profit and public agencies. In order to support the Westport Waterfront TOD and the realization of the Middle Branch Master Plan, the City has established an inter-agency coordination group called the Middle Branch Action Committee which meets monthly to share progress and coordinate efforts. A broader Advisory Committee made up of more than 30 private, public, community and non-profit stakeholders meets quarterly to provide input and guidance on the plan's implementation. Two concrete examples of this collaboration include efforts to revitalize the distressed communities around the Westport Waterfront TOD and restore the environment in the broader TOD area.



The developer of the Westport TOD has embraced this partnership approach and has hired a full-time staff person to help facilitate the rebuilding of the neighborhood's organizational capacity and assist in leveraging new resources for neighborhood revitalization. BUILD and The Reinvestment Fund, are currently working with the Maryland Department of Housing and Community Development, Baltimore Housing, the Maryland Department of Transportation and the Baltimore Department of Planning to raise funds to craft a neighborhood redevelopment strategy for the surrounding neighborhood. The developer has pledged \$6.35 million toward this effort.

The environmental permitting required to restore the ecology of the site required intense inter-agency coordination and the support of the Baltimore City Planning Department, the Maryland Department of the Environment, the US Army Corps of Engineers and the Critical Area Commission. Non-profit environmental organizations are working with the City, the developer and others to complete environmental restoration both within the TOD and the surrounding neighborhood. These include the Chesapeake Bay Trust, The National Aquarium of Baltimore, and The Parks & People Foundation, CSX Corporation, and others. Again the developer has provided considerable matching funds for this effort.

Westport Waterfront's ability to collaborate with diverse stakeholders, form strong public/private partnerships and commitment to involve the community has enabled a viable and sustainable TOD plan to take shape. The private investment and public commitment have furthered the project to a point where transportation and infrastructure improvements are ready to begin construction. The award of TIGER grant funds would enable the completion of much needed transportation and infrastructure improvements to enhance quality of life standards for community residents and to realize a project that will help Baltimore compete more successfully in the global economy.



**Rendering of the Westport Waterfront TOD looking north-westerly  
at the restored Middle Branch waterfront**

## V. Expected Benefits & Program Evaluation

### A. Expected Benefits

The Westport Waterfront TOD project and its variety of benefits have been discussed and presented in each section of this application as organized by the TIGER Grant program's Long Term Outcome Criteria. The following synopsis is meant to capture the critical elements of the expected benefits:

**Table 10: Expected Benefits Summary**

Primary Selection Criteria	Expected Benefits
<b>State of Good Repair</b>	Pavement management program channeled to economic and community development projects.
	Dramatically improve Citywide Bridge Sufficiency Rating by 2014.
	Two bridge projects in the corridor are entering final design and will be under construction concurrent with the early stages of the Westport Waterfront project.
	TIGER funds will be used to increase the scope of already programmed bridge rehabilitation projects to improve roadway operations in their immediate vicinity.
<b>Economic Competitiveness</b>	Increase the owner-occupied housing rate above the current rate of 26%.
	Addition of 15,000 retail, office and hotel jobs.
	Addition of 2,000 market rate and 200 affordable housing units.
	Minority- and Women-owned Business Enterprise participation in site development of 30% MBE/10% WBE.
<b>Livability</b>	Improvement on community health indicators in the Westport/Mt. Winans/Lakelands area.
	Decrease in home vacancy rate from current rate of 22%.
	CSX swing bridge will convert to hiker/biker trail.
	Establishment of a Workforce Development Center that provides services such as job readiness, skills training, financial literacy, remedial academic support.
	Access for the Westport/Mt. Winans/Lakeland/Cherry Hill communities to viable employment opportunities.
<b>Sustainability</b>	Increase in alternative modes of transportation trip generation to 15% modal split.
	Achieve Platinum Certification, U.S. Green Building Council's LEED Neighborhood Development (LEED ND) program.
	Conservation of area's natural resources – planting 70,000 trees and establish 16 acres of Open Space.
	Emission Reductions: Reduce Fuel 31% (gal/hr); Reduce HC 8.5 (grams/hr); Reduce CO 7.5 (grams/hr).
	Stabilize approximately 1,200 linear feet of existing eroding shoreline with rip rap and create .37 acre fringe wetland.
<b>Safety</b>	Construct a new pedestrian bridge at the Westport light rail station.
	Upgrade safety features at several railroad crossings near the site to enhance both pedestrian and vehicular safety.
	Construct off-site roadway improvements to eliminate several substandard design features of the freeways and ramps, and improve safety at intersections serving the neighborhood.
	Roadway and Highway improvements potentially correct 58 crashes.
	Upgrade sidewalks and sidewalk ramps to improve ADA access within and around the site.
	Eliminate the potential of unintended release of hazardous materials, particularly those that might enter the Middle Branch tributary of the Chesapeake Bay.

## B. Program Evaluation

The mixed-use nature of the Westport Waterfront TOD and the multi-modal impact of the proposed programs offer a tremendous volume of data that will allow for a meaningful program evaluation. To this end, the City of Baltimore will contract with the **University of Baltimore's Merrick School of Business, Jacob France Institute** to evaluate the job creation and economic benefits asserted in this application. **The Morgan State University's National Transportation Center and Center for Built Environment and Infrastructure Studies** will work together to evaluate the transportation and environmental outcomes of the project.

The evaluation criteria below are based on current City or Federally established systems and will be evaluated over the short term (2-year TIGER grant period) and a long term, full-project build-out, expected to be complete in 2018.

**Table 11: Project Evaluation Program**

Primary Selection Criteria	Program Measure	Current Status	Short Term Goal (2-yr TIGER Period)	Long Term Goal (2018 Buildout)
<b>State of Good Repair</b>	Pavement Condition Index (PCI) for Streets in Project Area	56	70	70
	Bridge Sufficiency Rating for Westport Bridges	<43.1	90	85
	Level-of-Services (LOS) Avg	E/F (worst)	B/A	A/A
<b>Economic Competitiveness</b>	New Jobs	-	1,070	15,649
	Owner Occupied Housing Rate	26%	26%	43%
<b>Livability</b>	Community Health Indicators below Baltimore City average	11	10	3
<b>Sustainability</b>	Emissions Reductions (PM Peak)			
	• Fuel (gal/hour)	351.4	241.9	TBD
	• HC (grams/hour)	2,507	2,293	TBD
	• CO (grams/hour)	69,331	6,409	TBD
	Stabilized Shoreline (linear feet)	-	1,200	1,200
	Non-Single Occupancy Vehicle Trip % in New Development	-	15%	30%
<b>Safety</b>	Annual Railroad Crossing Incidents	21	7	7
	Crashes	58 (total)	Reduce 7 crashes per year	